

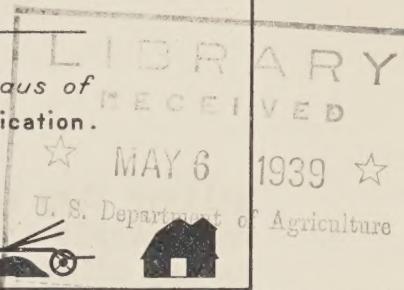
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news letter

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Vol. I.

April 25, 1939

No. 4

Dr. Henry G. Knight spoke before the American Tung Oil Association at Gulfport, Miss., March 27, his subject being "Research on Tung Oil".

"While the production of tung oil in the United States is fairly new" said Dr. Knight, "it is, nevertheless, fast becoming a subject of considerable economic importance. But new as this enterprise is, we have already advanced far enough to enable us to see that it is time to build the tung oil program on a solid foundation backed by scientific research".

On March 29 Dr. Knight also addressed the 5th Annual Meeting of the National Farm Chemurgic Conference at Jackson, Miss., giving the "Background and Preview of the Four Regional Research Laboratories." He mentioned the various legislative proposals which preceded the passage of the act establishing the laboratories, the selection of the locations for the laboratories, and the crops to be studied at each, and outlined some of the problems awaiting solution. He reminded his audience of the danger that new things may sometimes be "damned by ill-founded promises" or "wrecked by rose-colored test tubes."

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On March 31 S. H. McCrory talked before the 28th Annual Convention of the Texas Cotton Association, Houston, Texas, on "European Observations on American Cotton Packaging." "It has always been my belief," he told the meeting, "that in the United States we produced a superior quality of cotton, and I am pleased to say that my observations in Europe did not change this opinion. In the United States we are undoubtedly producing a high quality cotton, but from what I saw of our bales as they reached England and France, I am convinced American cotton deserves better packaging and more careful handling than it is now receiving".

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At the Fourth Annual Northwest Accident Conference held at St. Paul, Minn., April 11, Mr. McCrory made an address "Safety on the Farm is Mostly Home Made." In his talk he emphasized the fundamental importance of order in the prevention of accidents in the home, in the barns, and in the fields. "I am convinced," he said, "that if there were in the country more of that self discipline which results in better order of houses and other buildings, equipment and activities, there would be a much greater increase in safety. Not that country people are more careless than those in towns and cities, I don't

believe they are, in spite of the fact that it is generally agreed more people are killed accidentally in agricultural activities than in any other pursuit. There are several reasons for this, but they are not reasons why we should submit to these hazards as of the kind that cannot be met."

Mr. McCrory inspected a number of migratory waterfowl refuges of the Biological Survey in Louisiana, Texas, Oklahoma, and North Dakota. At College Station, Texas, he conferred with A. B. Conner, Director of the Station, with Messrs. Smith and Jones of the Agricultural Engineering Department, and with extension agricultural engineer M. R. Bentley, regarding cooperative work in Texas.

* * *

Regional Research Laboratories

H. T. Herrick gave an informal talk on the regional research laboratory program before the Saturday Morning Luncheon and Discussion Group on Department Functions and Policies, at their meeting on April 8. This group is composed of outstanding younger men and women of the Department between the salary levels of \$2,000 and \$2,900, who were selected for membership in the organization by their respective Bureau chiefs.

The job of getting out the plans and specifications of the four regional research laboratory buildings has been completed by the Division of Plans and Service, and the invitations to bid have been sent to a number of contractors in each area. It is anticipated that the contracts will be awarded by the first of July.

Special Survey Report

The Special Survey Committee which was appointed by the Secretary on July 14, 1938, with H. T. Herrick as Chairman, has completed its "Survey of and Proposed Program on Industrial Utilization of Agricultural Products." The report was sent to Congress on April 6. It consists of 893 typewritten pages and is the result of about 8 months work by the regional laboratory group assisted by many cooperators in the Bureau of Chemistry and Soils and the other Bureaus of the Department.

The first part of the report, which is divided into 3 sections, describes the Congressional authorization and explains the basis on which the Department determined the four regions into which the work is divided. It explains how the locations were chosen for the laboratories, and specifies the twelve farm commodities which are to receive first attention, namely, cotton, sweetpotatoes and peanuts in the Southern Laboratory; corn, wheat, and agricultural wastes in the Northern Laboratory; tobacco, apples, potatoes, vegetables, and milk products in the Eastern Laboratory; fruits, potatoes, vegetables, wheat and alfalfa in the Western Laboratory. It also summarizes in broad terms the findings of the survey of present research and the proposed program of work for the new laboratories.

The survey of present research activities on farm products was not confined to the twelve products selected for first attention in the laboratories. Part 2 of the report contains sections on 74 farm commodities, besides several on common constituents like starch, sugars, protein and cellulose, and others on processes like fermentation, or on uses like motor fuel. Each section presents a summary of the economic background of the commodity and its relation to surpluses, illustrated by charts taken from various Departmental publications.

The types of research which were discovered in the survey, and suggestions received by the committee for additional needed work, are classified and summarized in each section. This part of the report, ranging as it does from corn to fur animals, and from avocados to wheat, is in reality a broad survey of the economic and scientific status of American agriculture.

The third part of the report is described as a comprehensive research program to further the industrial utilization of surplus agricultural materials. Its purpose is to outline in a condensed form the coordinated investigations to be undertaken initially in the four regional research laboratories in cooperation with existing Federal, State, and other research organizations, and the methods of approach that will be used. The detailed planning of projects remains to be accomplished while the new laboratories are under construction.

A decision has not been reached on the matter of the printing and distribution of this report.

* * *

Carbohydrate Research Division

The meetings of the American Chemical Society recently held in Baltimore were attended by the following members of the Carbohydrate Research Division: C. F. Walton, Jr., F. H. Thurber, E. Yanovsky, E. K. Ventre and C. A. Fort. Papers were presented by Messrs. Ventre and Fort.

* * *

Fertilizer Research Division

Dr. Dean Burk gave an informal talk February 24 at a meeting of the Maryland Chapter Xi, University of Maryland, on "Chemical Mechanism of Biological Fixation".

Frank O. Lundstrom gave an extemporaneous talk March 23 at the American International Academy, Baltimore, Md., on "The Chemist and His Profession".

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Dr. Oliver R. Wulf gave a lecture on "The Interpretation of Some Infra-red Spectra of Organic Molecules in Solution" on March 1 before a seminar of the Department of Chemistry, Fordham University, N.Y.

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On March 31 Dr. Wulf addressed the Chemical Seminar of Catholic University, Washington, on "Infrared Spectra and Structure of Organic Molecules".

At the Baltimore meetings of the American Chemical Society, April 3 to 7 inclusive, this Division was represented as follows:

An invited paper on "Chemisorptions of Gases on Iron Synthetic Ammonia Catalysts" by S. Brunauer and Paul H. Emmett was presented before a symposium on catalysis by Dr. S. Brunauer.

Dr. S. L. Madorsky delivered a paper entitled "Potassium Metaphosphate, A Potential High Analysis Fertilizer Material" by S. L. Madorsky and K. G. Clark.

"The Anomalous Reaction between Ammonia and 9-Chlorofluorene" by L. A. Pinck and G. E. Hilbert (formerly with this Division but now with the Regional Research Laboratories) was presented by Mr. Pinck of this Division.

Dr. S. B. Hendricks delivered an invited paper on "Random Structures and Diffuse Scattering of Layer Silicate Lattices. Polymorphism of the Micas".

A paper entitled "The Infrared Absorption and the Association of Some Phenols" by O. R. Wulf and E. J. Jones was presented by Dr. Wulf.

"The Catalytic Decomposition of Ammonia Over Iron Synthetic Ammonia Catalysts", a paper by Katharine S. Love and Paul H. Emmett was presented by Dr. Emmett.

A paper on "A Thermal Method for the Separation of Gases and Isotopes" by A. K. Brewer of this Division and A. Bramley (recently appointed collaborator for this Division) was given by Dr. Bramley.

"Geochemistry of the Saratoga Basin: The Radioactivity of Saratoga Spring Waters and Rocks" by A. Keith Brewer of this Division and Dr. Oskar Baudish of the Saratoga Springs Foundation, was presented by Dr. Baudisch.

Dr. C. H. Kunsman, Chief of the Division, was in Pittsburgh, Pa. on March 23 when he visited the Mellon Institute where projects closely allied to our fertilizer investigations are in progress. A tour of inspection was also made of the Gulf Research Laboratories where catalytic investigations are carried on. These inspections were made the day preceding the Third Conference on Industrial Physics at the University of Pittsburgh and the meeting of the Advisory Council on Applied Physics and under the auspices of the American Institute of Physics.

On March 25 Dr. Sterling B. Hendricks participated, informally, in the Graduate Chemistry Seminar of Catholic University, Washington, when the subject was "The Structural Chemistry of Phosphorus and Silicon".

During the latter part of March A. L. Mehring, Fertilizer Research Division, visited a number of fertilizer plants in Georgia, South Carolina, and Florida, and conferred with the plant officials on problems relating to the manufacture and sale of fertilizers.

The Washington Chapter of the American Institute of Chemists held a dinner meeting in Baltimore on April 4. Frank O. Lundstrum, President of the Washington Chapter, presided. Among the prominent National Officers of the institute who took part in the program were Dr. Robert J. Moore, Production Manager of the Varnish & Resin Division and the Bakelite Corporation, National President; Dr. Joseph W. E. Harrison of LaWall & Harrison, Philadelphia, Pa., Vice-President; and Dr. William T. Read, Dean of the School of Chemistry of Rutgers University, National Councilor. The following members of the Fertilizer Research Division were present: Lewis F. Rader, Jr., Frank O. Lundstrom, Wm. H. Ross, J. Richard Adams, H. L. Marshall and Colin W. Whittaker.

Wm. H. Ross, J. Richard Adams, Colin W. Whittaker, K. D. Jacob, John O. Hardesty and Albert R. Merz, of the Fertilizer Research Division attended the Abstractor's luncheon in Baltimore on April 4. Dr. Ross, the only abstractor who has been contributing to Chemical Abstracts since its beginning in 1907, was an honored guest. Dr. Merz has been an abstractor for the past 25 years. Mr. Jacob is an Assistant Editor of the Soils, Fertilizers and Agricultural Poisons Section of Chemical Abstracts.

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Protein and Nutrition Research Division

Results of a recent investigation by D. Breese Jones and J. P. Devine of the Protein and Nutrition Research Division on the nutritive value of the proteins of yellow corn were presented by Dr. Jones at the meeting of the American Chemical Society, held in Baltimore, April 3 to 7, 1939. It has been generally regarded that the proteins of corn are unsatisfactory for promoting growth of animals. In the work now reported it has been shown that young rats will grow at a very satisfactory rate and develop into healthy, well-nourished, mature animals when fed exclusively a diet containing no protein other than that supplied by freshly-ground yellow corn. Nutritionally-essential mineral elements and vitamins were provided as supplements to the corn. The good results obtained with the corn proteins are attributed to the fact that all the proteins of the corn kernel were used and that an ample supply of the different vitamins was provided. In most of the previous work, feeding experiments

with corn have not been conducted with the whole corn kernel, but with one or two of its isolated proteins or with products which represent a disproportionately large amount of the corn proteins which are of poor nutritional value.

* * *

Division of Structures

Professor H. B. Walker, Head of the Department of Agricultural Engineering of the University of California, visited A. H. Senner's project on orchard heating at Baltimore, with Wallace Ashby and W. V. Hukill. Arrangements as to future conduct of the cooperative work with the University of California were agreed upon. Mr. Senner's work has resulted in development of two types of atomizing burners which together with vaporizing burners of various types are tested at the California stations.

J. R. Dodge has returned to Washington from Madison, Wisconsin, where he has been working with Max J. LaRock in summarizing data for the report on remodeled farmhouses. Mr. Dodge is now preparing a bulletin covering the technical phases of this work. This will include the effects of house improvements upon family living as well as upon temperature, humidity, and draft conditions.

Cooperation with the New Jersey Experiment Station in the study of storage of grass silage has been broadened to include studies by the Division of Mechanical Equipment of the Bureau, on equipment for ensiling grasses. J. R. McCalmont recently returned from Beemersville, N. J., where he made preparation for measuring pressures of four additional silos. It is expected that filling the silos will start the latter part of May.

W. R. Humphries is completing the preliminary survey of farm storage of grain sorghum in the Southern Great Plains Area. The only moist grain found was in eastern New Mexico. It had been stored in ricks with the grain still in the head. Mr. Humphries will attend a meeting of the Southern Great Plains Committee at Amarillo, Texas, on April 21 and 22, where he will report conditions observed on the recent survey.

Manuscripts for a leaflet "Liquefied Gas for the Household" by A. H. Senner and Helen S. Holbrook of Bureau of Home Economics and for a Farmers' Bulletin on "Farm Fences", by M. A. R. Kelley have been forwarded to the Office of Information.

* * *

Fiber Flax Investigations

W. M. Hurst reports that an experimental fiber flax tow shaker which has been in service at the Canby Flax Plant since February 21, has performed in a satisfactory manner. This machine, designed by M. C. Widger, has handled the tow from approximately 100 tons of flax straw and the only indication of wear is that of varnish from the trip

ends of hickory pins used for tearing the tow apart and shaking out shives and trash. The new machine removes over twice as much foreign material from the tow as the machine previously used.

Howard Carnes and Leonard Klein have completed the design of a fiber flax storage building to be constructed on the Oregon Experiment Station farm at Granger. The design includes retting tanks, water supply and retting water disposal facilities.

A trailer designed by George Stafford is proving useful in moving experimental equipment and supplies. This trailer rated at 1 1/2 ton capacity has a tilting bed to facilitate loading and unloading. When used with the 1/2 ton pick-up truck a two ton load may be transported.

* * *

Naval Stores Research Division

W. D. Pohle spent March 27 and 28 in New York attending meetings of Committee D-12 on Soaps and Detergents, of the American Society for Testing Materials. Mr. Pohle discussed with members of the Soap Committee the value of rosin as an ingredient of white soaps, soap chips, flakes and powders. From New York, Mr. Pohle proceeded to Philadelphia and visited the plant of Fels and Company, where he made some soap grading tests using the photoelectric photometer in the Fels laboratory. He conferred with their chemists, who are interested in the work being done in the Naval Stores Research Division on the use of rosin in soap.

Members of the Naval Stores Research Division who attended the meeting of the American Chemical Society in Baltimore were S. Falkin, E. E. Fleck, T. C. Chadwick and W. D. Pohle. They were particularly interested in the organic, petroleum and paint and varnish sections of the meeting, and gained interesting information for some of the papers presented.

C. F. Speh and W. C. Smith attended the meeting of Committee D-17, on Naval Stores, of the American Society for Testing Materials, held at Baltimore on April 5, 1939. The work of the Committee is to develop standard methods for testing naval stores products, and membership includes representatives from both producers and consumers, as well as those whose interest in naval stores is of a general nature. At the meeting progress on the various collaborative tests was reported, preparatory to establishment of tentative or standard methods of testing.

The Senior Class in Forestry of the University of Georgia, accompanied by Professors P. L. Buttrick and G. N. Bishop, visited the Naval Stores Station at Olustee, Florida, March 23 and 24. These

students, 42 in number, were given a two-day demonstration on the work of the Station.

The demonstrations consisted of a history and purpose of the naval stores work as carried on by the Bureau of Chemistry and Soils, a visit to the grounds and buildings, at which time the advantages of the improved type buildings and equipment, the proper specifications for elimination of fire hazards and reduced insurance rates were explained and pointed out.

Laboratory still demonstrations were given so that the students would be better able to comprehend the plant work. Demonstrations were then given in the plant on gum cleaning, distillation of clean gum at the steam still, and distillation of crude gum at the fire still. The improvements in these various types of equipment were pointed out. They were next shown wooden and metal rosin barrel cooperage, gluing a turpentine barrel, storage of rosin and turpentine and the other phases of the work related to processing of turpentine gum. The chemical and physical effects upon turpentine gum of various chemicals used in making of still materials and cups and accessories were shown them and lectures given on gum buying, gum selling, gum grading and marketing of naval stores products.

The work of the Station was explained by G. P. Shingler, Senior Chemist in Charge, E. L. Patton, Associate Chemical Engineer, Ray V. Lawrence, Junior Chemist and A. R. Shirley, Cooperative Agent in Naval Stores for State of Georgia.

Dr. Henry G. Knight visited the Station during these demonstrations and gave an inspirational talk to the students on the value of research.

It is believed that a visit and demonstration of this kind will be of very great assistance to these foresters when they leave school. The Station invites other forestry schools to bring their senior students to the Naval Stores Station for demonstrations of this type.

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Cotton Ginning Laboratories

Dr. Knight visited the U. S. Cotton Ginning Laboratories on March 30.

The setting up of experimental equipment for the cotton packaging project at the U. S. Cotton Ginning Laboratories at Stoneville, Miss. has progressed by the installation of new cleaner-extractor units and conveyors for the 3-80 gin stand and of a steam boiler and air heater for use with the government tower cotton drier.

Chas. A. Bennett, Engineer in Charge of the Cotton Ginning Laboratories, V. L. Stedronsky, Assoc. Mechanical Engineer, and T. L. Baggette, Assoc. Agricultural Engineer, of the Laboratory staff spent April 10 to 15 at the convention of the Texas Cotton Ginners' Association at Dallas, Texas. They contributed to the program by conducting a Forum in which about 1,500 ginners were at liberty to ask questions relating to ginning problems. They were assisted in this task by F. L. Gerdens of the Bureau of Agricultural Economics, Stoneville, Miss. and by F. E. Lichte, Cotton Ginning Specialist, College Station, Texas.

Dr. John W. Wright of the Bureau of Agricultural Economics was a visitor at the U. S. Cotton Ginning Laboratories on April 6 and 7, to discuss research on the cotton packaging project with the new high density gin press intended to be installed in the near future. This research is to be conducted by V. L. Stedronsky of the Laboratory staff under the supervision of Chas. A. Bennett, Engineer in Charge. Plans were also made for continued study of cotton compression at commercial compresses in New Orleans, La., in Lubbock and Abilene, Texas, and possibly other points, by Waldo H. Kliever, Assoc. Engineer Physicist, Bureau of Agricultural Engineering, and Chas. S. Shaw, Asst. Cotton Technologist, Bureau of Agricultural Economics. Some new elements to be investigated in connection with press cuts are uneven packing of cotton in the bales as determined by means of a weight distribution balance developed at the Laboratories, and uneven pressure distribution between the cotton and the compress platen as determined by means of a new multiple-element magneto-impedance pressure meter designed by Mr. Kliever.

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Industrial-Farm Products Research Division

The Agricultural By-Products Laboratory, at Ames, Iowa, has recently installed a new acid-resistant bronze autoclave for use in their research on the production of plastics from farm wastes. The autoclave is of the tumbling type heated by indirect steam. It has a working capacity of 20 pounds of shredded bagasse and can be used at steam pressures up to 200 pounds per square inch. A 2 horse power 250 pound gas-fired steam boiler, a 230-ton hydraulic press, and washing and drying equipment have already been installed for this work.

Dr. S. I. Aronovsky, Acting Chief of the Agricultural By-Products Laboratory, attended the spring meeting of the American Chemical Society at Baltimore, Md., April 3 to 7, where he presented a paper before the Cellulose Symposium on "The Chemical and Physical Characteristics of Various Industrial Pulps." Dr. Aronovsky spent a few days in Washington on official business before returning to Ames via Detroit, Chicago, and Urbana.

Dr. R. T. Milner, Acting Director of the U. S. Regional Soybean Industrial Products Laboratory at Urbana, Ill., addressed the Soybean Section of the Fifth Annual Conference of the National Farm Chemurgic

Council at Jackson, Miss. March 30. The subject of his address was "Finding Uses in Industry for Soybeans." Dr. Milner was in Baltimore on April 3-7 attending the meeting of the American Chemical Society, where he presented a paper entitled, "Casein Plastics," by G. H. Brother, before the Division of Agricultural and Food Chemistry, on April 4. Following the meetings of the Society, Dr. Milner spent several days in Washington conferring with Bureau officials relative to the work of the soybean laboratory.

Dr. G. H. Brother of the soybean laboratory spent March 14 and 15 in Washington attending meetings of Committee D-20 on Plastics of the American Society for Testing Materials.

Dr. J. Ansel Anderson of the National Research Council of Canada, Ottawa, visited the Soybean Laboratory on March 13.

P. Burke Jacobs of this Division attended the meeting of the Southern Regional Farm Chemurgic Conference, Jackson, Miss., March 27-30, where he delivered a paper on "Motor Fuels from Farm Products." Mr. Jacobs' itinerary also included Jacksonville, and Olustee, Fla., and New Orleans, La.

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Division of Mechanical Equipment

John W. Randolph left Washington for Laurel, Miss., about April 17, for several weeks stay in connection with planting, harvesting, and drying studies, involving the use of machinery in the production of sweet potatoes for starch manufacture. This work is in cooperation with the Bureau of Chemistry and Soils.

G. A. Cumings, W. H. Redit, and L. G. Schoenleber are supervising the field operations in connection with cooperative fertilizer placement experiments at several locations in the southeastern States. The crops in these particular studies are: corn, cotton, beans, tobacco, and peanuts.

According to E. M. Dieffenbach of the Logan, Utah, office of the Bureau, considerable interest is being shown in the manufacture of sodium chlorate. Within the past few years there has been a rapid increase in the use of sodium chlorate in the Rocky Mountain area, chiefly for the eradication and control of weeds. This material has been shipped in from distant points although salt, the chief raw material required for its production, is plentiful in Utah.

Two sets of mechanized blocking and thinning plots have been started on the single-seed-ball sugar-beet plantings at Davis, Calif. The purpose of these plots is to aid in determining the best methods of utilizing single seed and conventional planting to obtain the greatest degree of mechanization of blocking and thinning. Part of the plots received no hand work while others included some selective thinning or narrowing of blocks with long-handled hoes. Only check

plots were finger thinned to single plants. By these methods a \$4 to \$6 per acre hoeing replaces an \$8 thinning plus a \$2 hoeing or a cost of \$10 per acre for thinning and first hoeing.

The first two plantings of cotton in a planting method project have been made in the Alabama Experiment Station fields at Monroeville and Prattville, Ala. The purpose of this project is to compare variable-depth planting and hill-drop planting with the conventional constant depth method of drilling cotton. Each method will be with and without seed press wheels and the tests will be made on five Alabama Station fields in different parts of the State.

The legume coverage tests have been made in two areas in Alabama using moldboard plows, both tractor and mule drawn, standard disk plows and vertical disk plows with various sizes and spacing of disk blades. In these tests the speeds and depths of working are varied.

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Chemical Engineering Research Division

Dr. David J. Price and H. T. Herrick visited the sites of the Regional Research Laboratories at Peoria, Ill., Albany, California, and New Orleans, La., in the period March 3 to 20. They found marked interest in the various points visited in the proposed research work on industrial utilization of agricultural products. Dr. Price also conducted a number of conferences relating to dust explosion and farm fire prevention work of the Bureau.

On March 28-29 Dr. Price accompanied Mr. Herrick and Dr. May to Philadelphia to inspect the site of the Regional Research Laboratory. They held conferences with interested organizations in the proposed research work of the new laboratory. Considerable work was done during March and first part of April in connection with the preparation of specifications for regional laboratory buildings with special reference to the chemical laboratory equipment.

R. L. Hanson spent April 5 and 6 in Wilmington, Del., and Philadelphia, where he conferred with officials of the du Pont Co., concerning laboratory equipment for the regional laboratory at Wyndmoor. He also inspected the site at Wyndmoor.

C. A. Robinson of the Factory Insurance Association visited the laboratory of the Chemical Engineering Research Division on March 31 and discussed methods of dust analysis and dust testing.

Dr. Price, H. R. Brown and H. E. Roethe attended the meeting of the National Fire Waste Council at the offices of the U. S. Chamber of Commerce in Washington on March 31. In connection with the various reports presented at the meeting Dr. Price discussed recent developments in the work of the Bureau on dust explosion and fire prevention work. Awards were made at the conference to various cities with the lowest fire loss records during the past year.

Early in April Henry Mandle of the U. S. Bronze Powder Co. visited the Division offices and discussed the use of inert gas for explosion prevention in the aluminum bronze powder industry and at that time sections of the aluminum powder code were discussed with him.

Representatives of the Walter Kidde Company visited the Division on April 6 to discuss plans for a series of tests to determine how much disturbance of dust clouds will be created by the discharge of fire extinguishers.

Byron J. Culp represented the Division at a meeting on April 14, of the subcommittee on Inspection Forms of the Federal Fire Council. The Division has an active part in the work of the Council and is represented at all meetings.

Dr. Price attended the farm safety meeting of the National Safety Council held in Chicago on February 21 and reported on the activity of the Bureau in this field. A resolution was adopted by the members of the 20 organizations represented, to make some permanent arrangement for promoting the cooperative efforts of these organizations.

In a further effort to obtain information regarding the nature of the oxygen absorption by alfalfa hay under the influence of heat, preliminary experiments made by Dr. E. J. Hoffman, indicate that the presence of small quantities of ammonia increases oxygen absorption. If such influence of ammonia can be definitely confirmed by later experiments, the results may prove of importance in determining whether ammonia is a factor in the development of spontaneous heating in the hay mow.

Dr. Price, Chairman, and H. E. Roethe, secretary, assisted in revising the specifications for rural motorized fire apparatus prepared by the Farm Fire Protection Committee of the National Fire Protection Association.

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Food Research Division

A number of members of the Division attended the meetings of the American Chemical Society in Baltimore the first week of April. Those from the field stations of the Division were M. K. Veldhuis of Raleigh, N.C., and E. A. Beavens, and D. DeFelice of Geneva, N.Y., all of whom made official visits to headquarters in Washington during the week.

L. F. Martin and T. M. Shaw recently visited the New York Academy of Science in New York City, where they conferred regarding measurements of dielectric constants. While in New York, Dr. Martin, joined by John Hoffman of the Bureau Shops, spent some time at the Rockefeller Institute on problems connected with the construction of the ultra centrifuge in the Food Research Division.

H. C. Diehl and D. G. Sorber from the Seattle and Los Angeles stations, respectively, attended the meeting of the Pacific States Cold Storage Warehousemen's Association at Del Monte, Calif., April 5 and 6.

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Changes in Personnel

Recent Appointments (Indefinite or Probationary)

James M. Brown	Laborer (Wyndmoor, Pa.)	Eastern Reg. Res. Lab.
Allen J. Duplantis	Asst. Messenger (New Orleans, La.)	Southern Reg. Res. Lab.
Edward P. Gibbons	Laborer (Wyndmoor, Pa.)	Eastern Reg. Res. Lab.
John A. Gibbons	" " "	" " "
Mary F. Green	Jr. Clerk-Stenographer	Business Admin.
Paul D. Hill	Minor Scientific Helper	Prot. & Nut. Res. Div.
P. Paul Landi	Jr. Laborer (Stoneville, Miss.)	Cotton Ginning
Howard D. Lightbody	Prin. Biochemist (Albany, Calif.)	Western Reg. Res. Lab.
Ruth M. McGreevy	Asst. Clerk-Sten. (Peoria, Ill.)	Northern Reg. Res. Lab.
Virgil F. Pfeifer	Junior Chemical Engr. (Urbana, Ill.)	Ind. Farm Prods. Res.
Mrs. Emma L. Ray	Jr. Steno. (New Orleans, La.)	Southern Reg. Res. Lab.
Raymond E. Reynolds	Assoc. Architectural Engin.	Plans and Service
Warren B. Roodhouse	Agent (Urbana, Ill.)	Structures
Sam Schneider	Asst. Messenger	Bus. Admin. Div.
William G. Smiley	Junior Chemist (Urbana, Ill.)	Ind. Farm. Prods. Res. Div.
Fred M. Smith	Admin. Officer (N. Orleans, La.)	Southern Reg. Res. Lab.
Bruce Stewart	Jr. Laborer (Stoneville, Miss.)	Cotton Ginning
Mrs. Edna E. Wittig.	Jr. Steno. (Wyndmoor, Pa.)	Eastern Reg. Res. Lab.

Recent Appointments (Temporary)

Walter M. Ball	Carpenter & Millright (Part-time) (Stoneville, Miss.)	Cotton Ginning
Clifford H. Billett	Jr. Clerk (" " ")	" "
William B. Blankenship	Jr. Laborer (Part-time) (Stoneville, Miss.)	" "
S. Albert Collins	Jr. Laborer (Part-time) (Stoneville, Miss.)	" "
Ernest E. Diehl	Skilled Laborer (Part-time) (Ames, Iowa)	Mechanical Equipment
Raymond T. Farrelly	Asst. Engr. (Specifications writer)	Plans and Service
Joseph E. Hartley	Jr. Laborer (Part-time) (Stoneville, Miss.)	Cotton Ginning
James M. Littleton	Carpenter (Part-time) (Stoneville, Miss.)	" "
William McCartney	Carpenter (Part-time) (Stoneville, Miss.)	" "
Edward J. O'Sullivan	Mechanical Engineer	Plans and Service

Recent Appointments (Temporary) Cont'd

Cecil M. Pleasant	Jr. Laborer (Part-time)	Cotton Ginning
Samuel J. Ringel	Jr. Scientific Aid	Prot. & Nut. Res. Div.
Anthony Rodgers	Jr. Laborer (Part-time) (Stoneville, Miss.)	Cotton Ginning
Hesper M. Royer	Jr. Stenographer	Plans and Service
Robert A. Sanderson	Agent (Lincoln, Neb.)	Rural Electrification
Dora Shapiro	Junior Clerk-Stenographer	Carbohydrate Res. Div.
Edith L. Shwabsky	Junior Stenographer	Plans and Service
Alice W. Sowders	Junior Stenographer	" " "
Earl T. Swink	Agent (Blacksburg, Va.)	Rural Electrification
Mrs. Josephine M. Thompson	Junior Stenographer	Structures
Clesson N. Turner	Sr. Research Agricultural Engineer (Ithaca, N.Y.)	Rural Electrification
Francis D. Yung	Agent (Lincoln, Nebraska)	" " "
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Separations		
Andrew D. Baumert	Chief Engineering Draftsman	Plans and Service
Thomas O. Cannon	Assoc. Construction Engr., (Oxford, N.C.)	" " "
LaHoma, C. Finney	Junior Clerk-Typist	Reg. Res. Labs. (Admin.)
James W. Harris	Jr. Laborer (Part time) (Stoneville, Miss.)	Cotton Ginning
Bernice C. Larson	Jr. Stenographer	Plans and Service
Kenneth W. Lewellyn	Agent (Part-time) (Urbana, Ill.)	Structures
John E. Nicholas	Sr. Research Agr. Engr. (State College, Pa.)	Rural Electrification
Robert B. Prinz	Assoc. Architectural Engr. (Estimator)	Plans and Service
Mrs. Sue Rose	Jr. Steno (Wundmoor, Pa.)	Eastern Reg. Res. Lab.
S. Milbourn Snead	Engineering Aide (Part- time) (Auburn, Ala.)	Mechanical Equipment
Mrs. Loraine M. Snellings	Jr. Clerk-Typist	Bus. Admin. Div.
Aaron Thompson	Unskilled Laborer (Part- time) (Stoneville, Miss.)	Cotton Ginning
Clesson N. Turner	Sr. Research Agr. Engr. (Ithaca, N.Y.)	Rural Electrification
Harry M. Weeks, Jr.	Surveyman (Phila, Pa.)	Plans and Service

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